

ДЕКАНУ ПОЉОПРИВРЕДНОГ ФАКУЛТЕТА УНИВЕРЗИТЕТА У БЕОГРАДУ

На основу члана 10. „Правилника о минималним условима за стицање звања наставника на Универзитету у Београду“ („Гласник Универзитета у Београду“ бр. 192/16, 195/16, 199/17, 203/18 и 223/21), подносим

ИЗВЕШТАЈ О РАДУ РЕДОВНОГ ПРОФЕСОРА

за период од 2016. до 2021. године

Име и презиме	Зоран Марковић
Датум и место рођења	14.01.1963.
Ужа научна област	Примењена зоологија и рибарство
Институт за	Зоотехнику
Катедра за	Одгајивање и репродукцију домаћих и гајених животиња
Датум избора у звање редовног професора	18.06.2008.

БИБЛИОГРАФИЈА НАУЧНИХ И СТРУЧНИХ РАДОВА У ПРЕТХОДНОМ ПЕТОГОДИШЊЕМ ПЕРИОДУ (Са ознаком врсте резултата, односно М категорија рада)

Papers published in journals at the SCI list (2016-2020)

1.Božanić, M., **Marković, Z.**, Živić, M., Dojčinović, B., Perić, A., Stanković, M., Živić, I. (2019). Mouthpart Deformities of *Chironomus plumosus* Larvae Caused by Increased Concentrations of Copper in Sediment from Carp Fish Pond. Turkish Journal of Fisheries and Aquatic Sciences, 19 (3), 251-259; DOI: 10.4194/1303-2712-v19_03_08 (M23).

2.Stojanović, K., Živić, M., **Marković, Z.**, Đorđević, J., Jovanović, J., Živić, I. (2019). How changes in water quality under the influence of land-based trout farms shape chemism of the recipient streams – case study from Serbia. Aquaculture International, 27 (6):1625-1641, doi.org/10.1007/s10499-019-00414-1 (M22).

5.Božanić, M., Dojčinović, B., Živić, M., **Marković, Z.**, Manojlović, D., Živić, I. (2019). Bioaccumulation of heavy metals in *Ephemera danica* larvae under influence of a trout farm outlet waters. Knowledge and Management of Aquatic Ecosystems, 402, 50, doi.org/10.1051/kmae/2019040 (M22).

6.Миленка Božanić, Dajana Todorović^b, Miroslav Živić, Vesna Perić Mataruga, **Zoran Marković**, Ivana Živić (2018). Influence of a trout farm on antioxidant defense in larvae of *Ephemera danica* (Insecta: Ephemeroptera). Knowledge and Management of Aquatic Ecosystems, vol. br.419 (M 22).

7. Milošević, Dj., Stojanović, K., Djurdjević, A., **Marković, Z.**, Stojković Piperac, M., Živić, M., Živić, I. (2018). The response of chironomid taxonomy- and functional trait-based metrics to fish farm effluent pollution in lotic systems. *Environmental Pollution*, 242: 1058-1066 (M 21A).
8. Milenka Božanić, **Zoran Marković**, Miroslav Živić, Biljana Dojčinović, Aleksandar Perić, Marko Stanković, Ivana Živić (2019.) Mouthpart Deformities of Chironomus plumosus Larvae Caused by Increased Concentrations of Copper in Sediment from Carp Fish Pond; *Turkish Journal of Fisheries and Aquatic Sciences*; DOI: 10.4194/1303-2712-v19_03_08 . Vol. 19 br. 3, str 251-259. (M23).
9. Jelena Vranković; Miroslav Živić; Anđelina Radojević, Vesna Perić Mataruga, Dajana Todorović; **Zoran Marković**; Ivana Živić (2018.) Evaluation of oxidative stress biomarkers in the freshwater gammarid *Gammarus dulensis* exposed to trout farm outputs. *Ecotoxicology and Environmental Safety*; Volume 163; 84 – 95; doi.org/10.1016/j.ecoenv.2018.07.061 (M21).
10. Dulić, Z., Živić, I., Pergal, M., Živić, M., Stanković, M., Manojlović, D., **Marković, Z.** (2018): Accumulation and seasonal variation of toxic and trace elements in tissues of *Cyprinus carpio* from semi-intensive aquaculture ponds. *Annales de Limnologie - International Journal of Limnology*, 54, 4, 1-10. (M23).
11. Kartalovic, B., Pucarevic, M., **Markovic, Z.**, Stankovic, M., Novakov, N., Pelic, M., Cirkovic, M. (2017) . Determination of Niclosamide and its Metabolites in Liver and Muscles of Common Carp (*Cyprinus carpio*) Fingerlings. *Acta Scientiae Veterinariae*, 2017. 45: 1490. ISSN 1679-9216. (M23).
12. Stojanović, K., Živić, M., Dulić, Z., **Marković, Z.**, Krizmanić, J., Milošević, Dj., Miljanović, B., Jovanović, J., Vidaković, D., Živić, I. (2017). Comparative study of the effects of a small-scale trout farm on the macrozoobenthos, potamoplankton and epilithic diatom communities. *Environmental Monitoring and Assessment*, (2017), vol.189 br. 8. (M23).
13. Trbović D, Živić I, Stanković M, Živić M, Dulić Z, Petronijević R, **Marković Z** (2017) Dependence of the common carp (*Cyprinus carpio* L.) fatty acid profile on diet composition in a semi-intensive farming system: tissue and time variability. *Aquaculture Research* 48: 3121-3133 (M22).
14. **Marković, Z.**, Stanković, M., Rašković, B., Dulić, Z., Živić, I., Poleksić, V. (2016). Comparative analysis of using cereal grains and compound feed in semi-intensive common carp pond production. *Aquaculture International*; 24: 1699-1723 (M22).
15. Rašković B, Čičovački S, Ćirić M, **Marković Z**, Poleksić V (2016) Integrative approach of histopathology and histomorphometry of common carp (*Cyprinus carpio* L.) organs as a marker of general fish health state in pond culture. *Aquaculture Research*, 47:11, 3455-3463 (M22).
16. Božidar Rašković, Miloš Ćirić, Vesna Koko, Marko Stanković, Ivana Živić, **Zoran Marković** & Vesna Poleksić (2016). Effect of supplemental feeds on liver and intestine of common carp (*Cyprinus carpio*) in semi-intensive rearing system: histological implications. *Biologia* 71/2: 212 – 219, Section Zoology (M22).

Papers published in journals (2016-2020)

1. Nikola Molerović, Božidar Rašković, Radica Đedović, Dušica Ostojić Andrić, **Zoran Marković**, Saša Marić (2019). Characterization of the genetic structure of the brown trout (*Salmo trutta*) from “Braduljica” fish farm, Serbia, *Biotechnology in Animal Husbandry* 35 (3), 289-299, 2019; doi.org/10.2298/BAH1903289M (M24).

2. Vladimir Radosavljević, Vesna Milićević, Jelena Maksimović-Zorić, Ljubiša Veljović, Ksenija Nešić, Marija Pavlović, Dragana Ljubojević-Pelić, **Zoran Marković** (2019). Sturgeon diseases in Aquaculture, Arhiv veterinarske medicine, Vol. 12, No. 1, 5 - 20, 2019, Review paper UDK 639.3.09:597.423 (M51).

3. Vladimir Radosavljević, Jelena Maksimović-Zorić, Ljubiša Veljović, Ksenija Nešić, Zoran Marković, Dragana Ljubojević Pelić, Vesna Milićević (2018). Emerging viral diseases of cyprinids. Arhiv veterinarske medicine, Vol. 11, No. 2, 3-9, ISSN 1820-9955, UDK: 636.09:615.371.06 (M51).

4. Dejana Trbovic, Vesna Djordjevic, Aurelija Spiric, Radivoj Petronijevic, Vlado Teodorovic, Nenad Parunovic, **Zoran Markovic** (2018). Evaluation of the diet supplementation strategy on the flesh quality and fatty acid profiles in common carp (*Cyprinus carpio* L) (2018). Meat Technology 59 (1): 28-37. ISSN 0494-9846, Izdavač: Institut za higijenu i tehnologiju mesa, Beograd.

5. Radosavljević Vladimir, Jelena Maksimović-Zorić, Ljubiša Veljović, Dragana Ljubojević, Miroslav Ćirković, **Zoran Marković**, Vesna Milićević (2017): Cyprinid Herpesvirus Diseases. Archives of Veterinary Medicine, Vol.10, No.1, 51-61. ISSN 1820-9955, UDK 619(051) (M51).

6. Lujčić J., **Marković Z.**, Poleksić V., Urbányi B. 2018. Aquaculture in Serbia (in Hungarian). Hungarian Journal of Aquaculture and Fisheries 111(3):78-80 (M53).

Papers on a scientific conference of international importance (2016 - 2020)

1. **Marković Z.**, Stanković M, Rašković B, Sekulić N, Poleksić V (2018) Akvakultura u službi zaštite ugroženih vrsta riba u Srbiji. Ekološki i ekonomski značaj faune Srbije, Zbornik radova sa naučnog skupa održanog 17. Novembra 2016. Srpska akademija nauka i umetnosti, naučni skupovi, Knjiga CLXXI, Odeljenje hemijskih i bioloških nauka, Knjiga 12, 173-197 (M61).

2. Ivana Živić, Aleksandar Ostojić, Branko Miljanović, **Zoran Marković** (2018). Makroinvertebrate tekućih voda Srbije i njihov bioindikatorski značaj u proceni kvaliteta vode, Zbornik radova sa naučnog skupa održanog 17. Novembra 2016. Srpska akademija nauka i umetnosti, naučni skupovi, Knjiga CLXXI, Odeljenje hemijskih i bioloških nauka, Knjiga 12, 199-229 (M61).

3. B. Rašković, V. Golubović, **Z. Marković**, V. Poleksić (2018.): Comparison of two histological approaches for assessment of fish intestinal health in nutrition trial; Conference proceedings, 8th International conference "Water & Fish", Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany; 485 – 487, ISBN 978-86-7834-308-7 (M33).

4. M. Božanić, I. Živić, M. Stanković, K. Stojanović, D. Vukojević, **Z. Marković** (2018.): Percentage of morphological deformities of mouthparts in *Chironomus plumosus* (Diptera: Chironomidae) larvae from the carp ponds; Conference proceedings, 8th International conference "Water & Fish", Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany; 466 – 471, ISBN 978-86-7834-308-7 (M33).

5. R. Relić, M. Stanković, B. Dejanović, **Z. Marković**, V. Poleksić (2018.): Effects of different dietary oils on some blood parameters in common carp fingerlings; Conference proceedings, 8th International conference "Water & Fish", Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany; 459 – 465, ISBN 978-86-7834-308-7. ISBN 978-86-7834-308-7 (M33).

6. J. Vranković, M. Stanković, **Z. Marković** (2018.): SUPEROXIDE DISMUTASE AND CATALASE ACTIVITIES IN HEPATOPANCREAS OF RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) FROM DIFFERENT AQUACULTURE FACILITIES; Conference proceedings, 8th International conference “Water & Fish”, Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany; 377 – 378, ISBN 978-86-7834-308-7 (M34).

7. Radosavljević, V. Milićević, J. Maksimović-Zorić, K. Nešić, N. Novakov, **Z. Marković** (2018.). Emerging fish diseases in Serbian Aquaculture, Conference proceedings, 8th International conference “Water & Fish”, Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany, 109-114, ISBN 978-86-7834-308-7 (M33).

8. I. Živić, **Z. Marković** (2018.): Rearing of leeches in abandoned ponds of fish farms and specialized rearing facilities; Conference proceedings, 8th International conference “Water & Fish”, Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany, 81-89, ISBN 978-86-7834-308-7 (M33).

9. Trbović, D. Živić, I. Đorđević, V. Baltić, T. Dulić, Z. Spirić, A. **Marković Z.** (2018). Fatty acid compositions of zooplankton and benthos in freshwater earthen ponds as a natural diet for common carp – comparison with commercial diets. 8th International conference “Water & Fish”, Faculty of Agriculture, University of Belgrade – Serbia and International aquatic veterinary biosecurity consortium, Ludwig-Maximilians University Munich, Germany 24 – 29. ISBN 978-86-7834-308-7 (M33).

10. Vladimir Radosavljević, Vesna Milićević, Tatjana Labus, Jelena Maksimović-Zorić, Dragana Ljubojević, Miroslav Ćirković, **Zoran Marković** (2016): Aquaculture and fish health in Serbia. Second International Symposium of Veterinary Medicine, Belgrade June 22–24, 2016. ISBN: 978-86-81761-55-7. Publisher Scientific Institute of Veterinary Medicine of Serbia, Belgrade. Proceedings, pp 65-69 (M33).

11. Relić R., Ardó L., **Marković Z.**, Stanković M., Davidović V., Poleksić V. (2016): Feed quantity effects on some water quality parameters and stress indicators in common carp (*Cyprinus carpio* L.). International Symposium on Animal Science 2016. Belgrade, November 24th – 25th 2016, 367-373 (M33).

12. Stanković, M., Radosavčev, N., Perić, A., **Marković, Z.** (2016): The effect of survival koi carp larvae with different water aeration intensity. International Symposium on Animal Science 2016. Belgrade, November 24th – 25th 2016, 433-436 (M33).

13. Perić, A., Stanković, M., Živić, I., Stojanović, K., Božanić, M., **Marković, Z.** (2016): Effects of different feed types on the growth of common carp (*Cyprinus carpio* L., 1758) fry. International Symposium on Animal Science 2016. Belgrade, November 24th – 25th 2016, 428-432 (M33).

Papers on a scientific conference of international importance published in the abstract (2016-2020)

1. Božanić, M., Živić, I., Marjanović, S., Stojanović, K., Stanković, M., Vukojević, D., **Marković, Z.** (2019). Does the supplemental feed type used for carp nutrition influence on mentum deformities in *Chironomus plumosus* larvae? Abstract book, 11th Symposium for European Freshwater Sciences, June 30–July 5, 2019, Zagreb, Croatia, pp.436 (M62).

2. Vladimir Radosavljević, Vesna Milićević, Jelena Maksimović-Zorić, Ljubiša Veljović, **Zoran Marković**, Dragana Ljubojević (2018). Herpesvirusne bolesti ciprinida. XX Simpozijum Epizootiologa i epidemiologa, Zbornik kratkih sadržaja, ISBN 978-86-83115-33-4, Izdavač Srpsko veterinarsko društvo, Sekcija za zoonoze, Vrnjačka Banja, 18-20 april 2018 (M62).

3. Rašković, B., Poleksić, V., Vuković, G., Čupić-Miladinović, D., Božić, G., **Marković, Z.**, Brkić, D. (2018). S-metolachlor: Acute and Subacute Effects on Common Carp (*Cyprinus carpio* L.). 10th Congress of Toxicology in Developing Countries (CTDC10) and 12th Congress of the Serbian Society of Toxicology (12th SCT), 18-21 April, Belgrade, Serbia, Book of Abstracts, p154 (M62).

4. Radosavljević Vladimir, Vesna Milićević, Jelena Maksimović-Zorić, Ljubiša Veljović, **Zoran Marković**, Dragana Ljubojević (2017): Herpesvirusne bolesti ciprinida. XIX simpozijum epizootiologa i epidemiologa, 05-07. April 2017. Vršac. ISBN 978-86-83115-31-0, Izdavač Sekcija za zoonoze, Srpsko veterinarsko društvo, Zbornik kratkih sadržaja pp 71-72 (M62).

5. Radosavljević V., Milićević V., Maksimović-Zorić J., Jakić-Dimić D., **Marković Z.**, Ljubojević D., Ćirković M. The prevalent bacterial fish diseases in fish farms in Serbia. THE INTERNATIONAL SYMPOSIUM ON ANIMAL SCIENCE (ISAS) 2017 05-10.06.2017. Herceg Novi, Montenegro Book of Abstracts pp 33 ISBN: 978-86-7520-402-2 (M62).

6. Radosavljević V, Milićević V, Jakić-Dimić D, Maksimović-Zorić J, **Marković Z**, Ljubojević D, Novakov N (2017): Emerging and re-emerging fish diseases in Serbia, 18th International Symposium of the World Association of Veterinary Laboratory Diagnosticians, June 7th-10th, Sorrento, Italy, Abstract book pp 226 (M34).

7. Vladimir Radosavljević, Vesna Milićević, Dragana Ljubojević, Dobrila Jakić-Dimić, Ksenija Nešić, Jelena Maksimović-Zorić, **Zoran Marković** (2017): The impact of climate change on the health of fish in aquaculture. International Scientific Conference "Objectives of Sustainable Development in the Third Millennium", 20 -22 April, Belgrade (Serbia). Book of Abstracts, p.74 (M62).

8. Božanić, M., Radojević, A., **Marković, Z.**, Stojanović, K., Stanković, M., Perić, A., Novaković, B., Živić, I. (2017). Bioaccumulation of heavy metals in the body of chironomids and occurrence of oral deformities in larvae cultured in sediment enriched with copper. Proceedings of the 6th Aquatic Biodiversity International Conference, Sibiu, Romania, 27-30. September 2017, Book of Abstracts, p. 47 (M34).

9. Vranković, J., Radojević, A., Živić, M., **Marković, Z.**, Živić, I. (2017). Changes in superoxide dismutase and catalase activities of the amphipod *Gammarus dulensis* in the vicinity of the trout farm. Proceedings of the 6th Aquatic Biodiversity International Conference, Sibiu, Romania, 27-30. September 2017, Book of Abstracts, p. 21 (M34).

10. **Marković Z**, Stanković M, Rašković B, Sekulić N, Poleksić V (2016) Akvakultura u službi zaštite ugroženih vrsta riba u Srbiji. Ekološki i ekonomski značaj faune Srbije, Srpska akademija nauka i umetnosti, Akademijaski odbor za proučavanje faune Srbije, 17. novembar. Knjiga sažetaka, 15-16 (M61).

11. Rašković B., Nedeljković A., Božičković I., Poleksić V., **Marković Z.**, Popp J., Rösch P., (2016): Raman spectroscopy of fish fillets - outcome of AREA project. State-of-the-art technologies: challenge for the research in Agricultural and Food Sciences Conference, Belgrade, Serbia, 18-20 April 2016. Book of Abstracts, p. 98. ISBN 987-86-7834-247-9 (M62).

12. Perić A., **Marković Z.**, Stanković M., Stojanović, K., Božanić, M., Živić, I. (2016): Cultivation of *Chironomus riparius* as food for carp which are growing in tank system. State-of-the-art technologies: challenge for the research in Agricultural and Food Sciences Conference, Belgrade, Serbia, 18-20 April 2016. Book of Abstracts, p. 98. ISBN 987-86-7834-247-9 (M62).

13. Stanković M., Andrejević N., Perić A., Dulić Z., **Marković Z.** (2016): Evaluation of production performance of carp yearlings with different stocking densities. State-of-the-art technologies: challenge for the research in Agricultural and Food Sciences Conference, Belgrade, Serbia, 18-20 April 2016. Book of Abstracts, p. 122. ISBN 987-86-7834-247-9 (M62).

14. Stanković M., Andrejević N., Perić A., Dulić Z., **Marković Z.** (2016): Farming of one-month-old carp in monoculture: single vs. mixed age groups. State-of-the-art technologies: challenge for the research in Agricultural and Food Sciences Conference, Belgrade, Serbia, 18-20 April 2016. Book of Abstracts, p. 123. ISBN 987-86-7834-24(M62).

Tehničko rešenje

Vladimir Radosavljević, **Zoran Marković**, Ksenija Nešić, Božidar Savić, Jadranka Žutić, Vesna Milićević, Nataša Glamočlija

Program kontrole infekcije riba koi herpesvirusom (KHV) u akvakulturi

Novo tehničko rešenje primenjeno na nacionalnom nivou izrađeno u okviru realizacije projekta tehnološkog razvoja - TR 31011, TR 31075(2011-2019), 2019, u listi tehničkih rešenja redni broj 303, decembar 2019. **M82**

НАСТАВНА АКТИВНОСТ У ПРЕТХОДНОМ ПЕТОГОДИШЊЕМ ПЕРИОДУ
(Списак предмета са статусом предмета (обавезни или изборни, ниво студија) у чијем извођењу је наставник учествовао; Списак менторства и/или учешћа у комисијама за одбрану завршних радова на докторским, специјалистичким или мастер академским студијама са насловом рада, именом и презименом кандидата)

Основне академске студије

Агроекономија

Модул-Предмет:

-Аквакултура (Изборни)

Биљна производња

Модул-Предмет:

-Аквакултура (Изборни)

Зоотехника

Модул-Предмет:

-Рибарство (Обавезни)

-Риболов и газдовање риболовним водама (Изборни)

-Гајење украсних водених биљака, бескичмењака и риба (Изборни)

-Закони и прописи у зоотехници (Изборни)

-Техничко – технолошка решења при изградњи и опремању рибњака (Изборни)

Мастер академске студије

Заштита животне средине у пољопривреди

Модул-Предмет:

-Еколошка аквакултура (Изборни)

Зоотехника

Модул – Предмет:

-Исхрана риба и других водених организама (Изборни)

-Технологија производње у аквакултури (Изборни)

Пољопривреда

Модул-Предмет:

- Здравствена заштита риба и других водених организама (Изборни)
- Технологија производње у аквакултури (Изборни)
- Екологија животиња и заштита животне средине (Изборни)
- Исхрана риба и других водених организама (Изборни)
- Репродукција риба и других водених организама (Изборни)

Специјалистичке академске студије

Модул-Предмет:

- Репродукција риба (Изборни)
- Гајење риба (Изборни)

Докторске студије

Пољопривредне науке

- Методе истраживања у зоотехници (Изборни)
- Мониторинг система у аквакултури и заштита реципијента (Изборни)
- Прерада риба (Изборни)
- Производни системи у аквакултури (Изборни)
- Технологија гајења у аквакултури (Изборни)

ФАКУЛТЕТСКЕ, СТРУЧНЕ И ДРУШТВЕНЕ АКТИВНОСТИ У ПРЕТХОДНОМ ПЕТОГОДИШЊЕМ ПЕРИОДУ (Учешће у пројектима, комисијама, одборима, стручним органима, професионалним удружењима или организацијама националног или међународног нивоа и слично на и/или ван Факултета)

Учешће у пројектима:

Финансирани од стране Министарства науке РС

-Унапређење производних капацитета шарана (*Cyprinus carpio* L) програмима исхране и селекције (ТР31075, 2010-2019) – *руководилац*

Међународни пројекти

-Black bullhead (*Ameiurus melas*) in Ponjavica Nature Park: biological characteristics, effects on native ichthyofauna, mass removal and experimental rearing, ID 24690 – 1, Rufford Foundation, 2020-2021. – *učesnik*

- Mass removal of the black bullhead (*Ameiurus melas*) – Possibilities for self-sustaining commercial farming in Serbia. Rufford Foundation. 2020-2021. – *učesnik*

- Project accepted under the 7th Framework Programme (FP7-REGPOT-2012-2013-1), Advancing research in agricultural and food sciences at Faculty of agriculture University of Belgrade - AREA (2013 -2016) – *tim lider*

- Project FAO UN, 2019.: TCP/SRB/3702/C2 (653785). Autor - Preparation of study “Background report on Serbian rules and regulations in the area of fisheries”

Секторске анализе за ИПАРД 3 програмирање

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Подносилац извештаја
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